

CLAIMS AMENDMENTS

Please replace the current version of the claims of invention with the following claims:

1. (*original*) A head assembly for a reactor pressure vessel, comprising:
 - a reactor pressure vessel closure head;
 - a seismic support platform spaced from the closure head;
 - an array of control rod drive mechanisms, each control rod drive mechanism including an electro-magnetic coil stack assembly and having a lower end supported by the reactor pressure vessel and an upper end supported by the seismic support platform;
 - a lower shroud surrounding the electro-magnetic coil stack assemblies and having an upper end spaced from the seismic support platform in air flow communication with the atmosphere around the control rod drive mechanisms;
 - a plurality of internal ducts disposed between control rod drive mechanisms within the array of control rod drive mechanisms, each duct extending from a lower end disposed below the upper end of the lower shroud and in air flow communication with the lower shroud to an upper end;
 - an upper plenum disposed above the seismic support platform in air flow communication with the internal ducts;
 - a missile shield assembly disposed within the upper plenum;
 - a plurality of fan assemblies disposed on the upper plenum in air flow communication with the upper plenum; and
 - lift legs connected with the reactor pressure vessel closure head and supporting the seismic support platform, the upper plenum and the missile shield assembly for removal of the head assembly as an integral assembly.

2. (*canceled*)

3. *(canceled)*

4. *(canceled)*

5. *(currently amended)* A head assembly for a reactor pressure vessel, comprising:

a reactor pressure vessel closure head;

a seismic support platform spaced from the closure head;

an array of control rod drive mechanisms, each control rod drive mechanism including an electro-magnetic coil stack assembly and having a lower end supported by the reactor pressure vessel and an upper end supported by the seismic support platform;

a lower shroud surrounding the electro-magnetic coil stack assemblies and having an upper end spaced from the seismic support platform in air flow communication with the atmosphere around the control rod drive mechanisms;

a plurality of internal ducts disposed within the array of control rod drive mechanisms, each duct extending from a lower end disposed in air flow communication with the lower shroud to an upper end, wherein the internal ducts extend within the array of control rod drive mechanisms through ~~are seismically supported by~~ the seismic support platform and have internal plates in the section of the ducts disposed in the seismic support platform;

an upper plenum disposed above the seismic support platform in air flow communication with the internal ducts;

a missile shield assembly disposed within the upper plenum;

a plurality of fan assemblies disposed on the upper plenum in air flow communication with the upper plenum; and

lift legs connected with the reactor pressure vessel closure head and supporting the seismic support platform, the upper plenum and the missile shield assembly for removal of the head assembly as an integral assembly.

6. (*currently amended*) The head assembly of Claim 1, wherein the internal ducts are supported by the upper plenum and wherein each lift leg comprises an upper leg member attached by a clevis assembly to a lower leg member with the upper plenum supported by the upper leg member and the seismic support platform supported by the lower leg member.

7. (*withdrawn*) The head assembly of Claim 1, wherein the internal ducts and the upper plenum are in air flow communication through a ring header duct disposed below the seismic support platform in air flow communication with the internal ducts and at least one cross-over duct in air flow communication with the ring header duct and the upper air plenum.

8. (*withdrawn*) The head assembly of Claim 7, wherein the internal ducts are supported by the ring header duct.

9. (*canceled*)

10. (*new*) The head assembly of Claim 1, wherein the internal ducts are a backfit into an existing head assembly.

11. (*new*) A head assembly for a reactor pressure vessel, comprising:

- a reactor pressure vessel closure head;
- a seismic support platform spaced from the closure head;
- an array of control rod drive mechanisms, each control rod drive mechanism including an electro-magnetic coil stack assembly and having a lower end supported by the reactor pressure vessel and an upper end supported by the seismic support platform;
- a lower shroud surrounding the electro-magnetic coil stack assemblies and having an upper end spaced from the seismic support platform in air flow communication with the atmosphere around the control rod drive mechanisms;
- a control rod drive mechanism plenum disposed between the closure head and the lower shroud;

a plurality of internal ducts disposed between control rod drive mechanisms within the array of control rod drive mechanisms, each duct extending from a lower end disposed in the control rod drive mechanism plenum;

an upper plenum disposed above the seismic support platform in air flow communication with the internal ducts;

a missile shield assembly disposed within the upper plenum;

a plurality of fan assemblies disposed on the upper plenum in air flow communication with the upper plenum; and

lift legs connected with the reactor pressure vessel closure head and supporting the seismic support platform, the upper plenum and the missile shield assembly for removal of the head assembly as an integral assembly.

12. (*new*) The head assembly of Claim 11, wherein the internal ducts have an L shape.

13. (*new*) The head assembly of Claim 11, wherein the internal ducts have a rectangular shape.